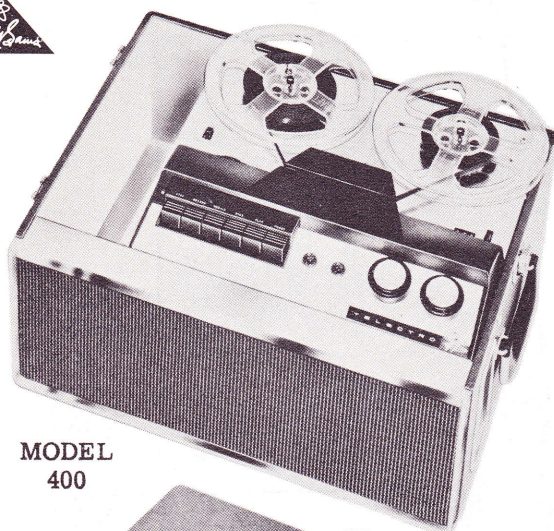
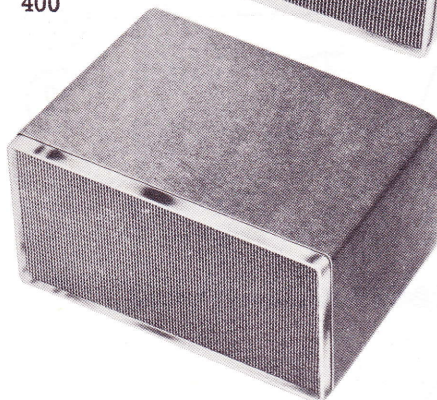
TELECTRO MODELS
333, 400MODEL
400MODEL
333TELECTRO MODELS
333, 400

GENERAL INFORMATION

Telectro Models 333 and 400 are three-speed tape recorders and can play back both monaural and stereophonic recordings.

Model 333 will record and play back monaural and play back stereo. Model 400 will record and play back stereo. Recordings can be made from a microphone, radio, phonograph, tuner or TV set. An external speaker must be used to play back stereo recordings.

These models have three tape speeds, $7\frac{1}{2}$, $3\frac{3}{4}$ and $1\frac{7}{8}$ ips. A two-position equalization switch for $7\frac{1}{2}$ ips and $3\frac{3}{4}$ or $1\frac{7}{8}$ is provided. Using both tracks, recording times are as follow:

Tape Length	$7\frac{1}{2}$ ips.	$3\frac{3}{4}$ ips.	$1\frac{7}{8}$ ips.
1200 ft.	1 hour	2 hours	4 hours
1800 ft.	$1\frac{1}{2}$ hours	3 hours	6 hours
2400 ft.	2 hours	4 hours	8 hours

These recorders operate on 60 cycles, 105-120 volts AC only.

Manufactured By:

Telectrosonic Corporation
35-18 37th Street
Long Island City 1, New York

HOWARD W. SAMs & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of CQ444

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1961 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



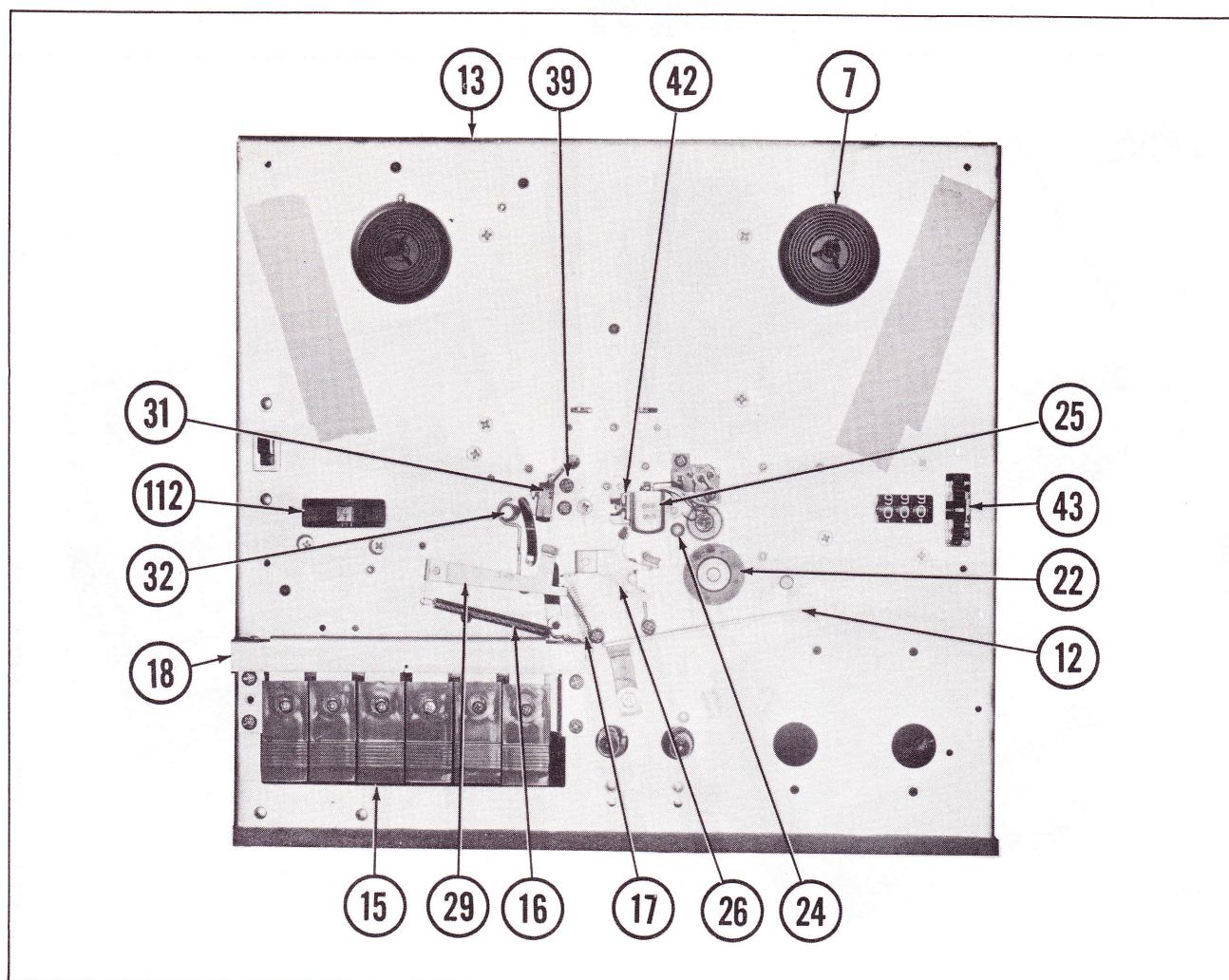


FIG. 1 TOP VIEW OF MECHANISM

FUNCTION OF CONTROLS

Power On-Off, Volume Control #1

Turns power on and off for entire unit. Regulates volume on monaural playback. Determines recording level. Controls first-channel volume on stereo playback on Model 333 and regulates the record level and playback for the first channel stereo on Model 400.

Volume Control #2

On Model 333, it controls the volume for stereo playback only. On Model 400, it controls the record level and volume for stereo recording and playback.

Tone Control #1

Controls bass and treble response on monaural

playback; first channel tone on stereo playback. It does not function during record.

Tone Control #2

Functions on second channel stereo playback only.

Rotary Speed Selector

Selects desired tape speed: $7\frac{1}{2}$, $3\frac{3}{4}$, or $1\frac{7}{8}$ ips. This control cannot be turned unless the pushbuttons are in the Stop position.

Equalization Switch

In up position, it equalizes response for $7\frac{1}{2}$ ips speed and down position for $3\frac{3}{4}$ and $1\frac{7}{8}$ ips speeds.

FUNCTION OF PUSHBUTTONS

In order for the pushbuttons to work properly, they should be depressed firmly. All buttons lock into

position when depressed except stop and pause. The recorder can be changed from one function to another

immediately except from wind and rewind to play; in this case, the stop button must first be depressed.

Stop

Applies brake to both spindles and returns all pushbuttons to neutral.

Record

Moves play-record switch into record position.

Rewind

Returns tape rapidly to supply reel. Moves wind-rewind pulley, increasing tension on rewind belt which turns supply spindle.

Wind

Moves tape rapidly in play and record direction.

Moves wind-rewind pulley, increasing tension on wind belt which turns takeup spindle.

Play

Moves tape for playback (or recording, if Record button is depressed simultaneously). Brings pressure roller and pressure pads into position against capstan and record head.

Pause

Stops tape by removing pressure roller from capstan and applying the brake to the spindles. Record or playback settings are not disturbed.

On-Off Monitor

Turns speaker on or off for monitoring during recording.

INPUT AND OUTPUT JACKS

External Speakers 1 and 2

Used when connecting external speakers for playback. Speaker 1 jack is used for monaural playback; when a speaker is plugged in, it disconnects the internal speaker of the recorder. Speaker 2 jack is used for channel two on stereo playback with the internal speaker of the recorder or with an external system plugged into speaker jack 1.

Stereo Phono 1 and 2

Used for connecting phono outputs to recorder

for recording stereophonic records.

Microphone Low Level

Plug microphone into this jack for microphone recordings.

Radio Phono

A high level input used when recording from radio, phonograph, tuner, etc., by means of a patch cord.

OPERATING INSTRUCTIONS

Threading the Tape

Place reel of tape on left spindle; empty reel on right spindle. Thread tape in slot with shiny side toward the front of recorder. Insert loose end of tape into one of the slots in the empty reel and turn reel counterclockwise to take up slack in the tape.

To Make Recording

Plug the microphone into the Low Level input jack. Set the rotary Speed Selector to the desired speed. Turn on the power by rotating On-Off Volume control #1 clockwise until a click is heard. Allow sufficient time for the tubes to warm up. Depress the Record button and adjust Volume control #1 so the level light will flicker on the loudest passage. Hold the Record button down and depress the Play button until both are locked in the down position. If both buttons will not stay down or a buzzing noise is heard, the tape is not properly threaded. Depress the Stop button at the end of a recording; at the end of the tape, the recorder will stop automatically.

Hold the microphone approximately eight inches from the mouth when recording voice. Place the microphone two or three feet in front of the loudspeaker when recording from a radio, phonograph, or TV set.

Hold the Pause button down to interrupt a re-

cording briefly. The recorder will continue to record when the Pause button is released.

These models are dual-track recorders. The top half of the tape is used during a recording. After the entire reel is recorded, the full reel is removed from the takeup spindle, turned over, and placed on the supply spindle. After threading the tape, a new recording can be made. This doubles the playing and recording time of a reel of tape.

It is possible to record directly from a radio, phonograph, tuner, or TV set by connecting a patch cord between the High Level jack and the desired instrument.

To Wind or Rewind Tape

Depress the Wind or Rewind button to move the tape in the desired direction. Depress the Stop button to stop the tape. The recorder will stop automatically at the end of the reel.

To Play Monaural Recordings

Thread the tape as described under "Threading the Tape". Depress the Play button. Adjust Volume and Tone controls #1. Volume and Tone controls #2 should be turned fully counterclockwise.

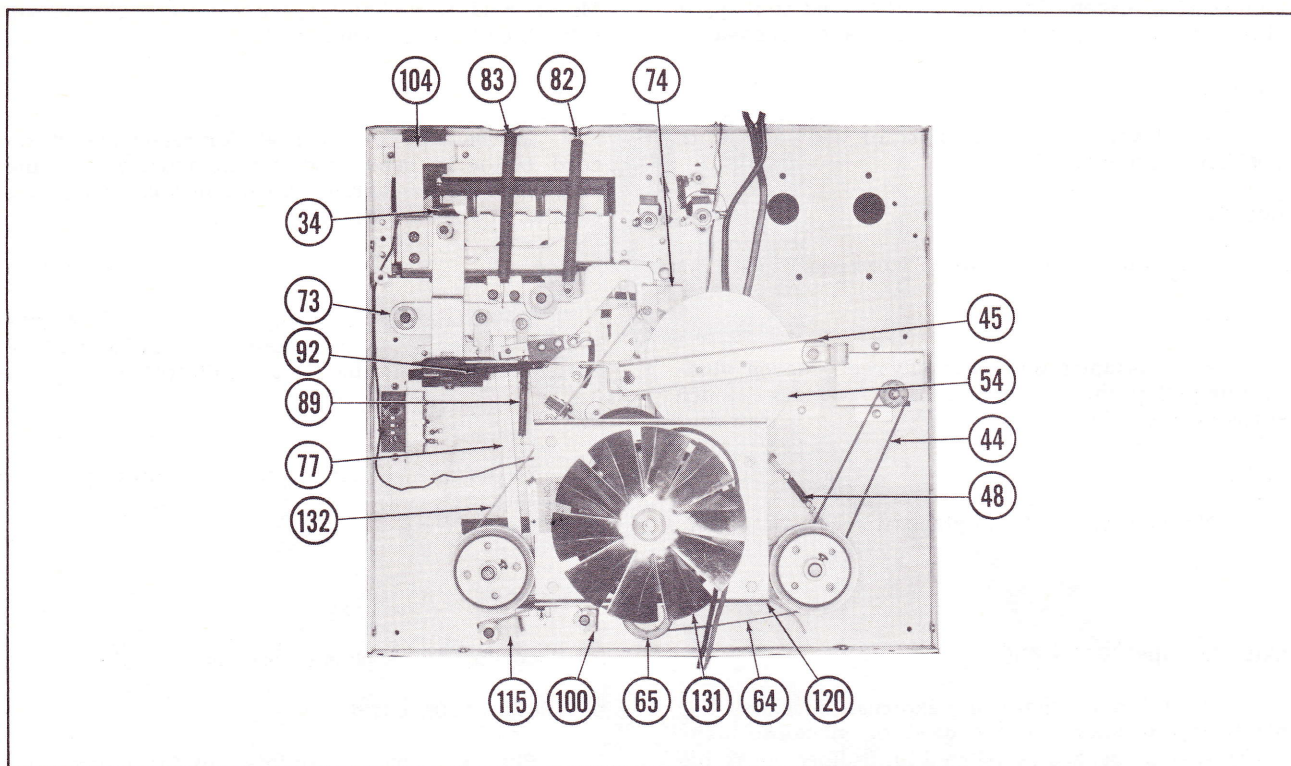


FIG. 2 BOTTOM VIEW OF MECHANISM

To Play Stereophonic Tapes

A second speaker system is required to play stereo tapes. Plug the second speaker system into External speaker jack 2. Adjust Volume and Tone controls #1 for the first channel and Volume and Tone controls #2 for the second channel.

To Make a Stereophonic Recording - Model 400

Plug one microphone into the Low Level input jack #1, and another microphone into Low Level input jack #2. Rotate the On-Off Volume control #1 clockwise until a click is heard to turn the power on. Adjust Volume control #1 and Volume control #2 so the Level lights will flicker on the loudest passage of sound. Hold Record button down and depress the Play button until both are locked into position. If both buttons will not stay down or a buzzing noise is heard, the tape is not properly threaded.

Hold the microphone approximately eight inches from the mouth when recording voice and two or three feet from the loud-speaker when recording from a radio, phonograph, or TV set.

Hold the Pause button down to interrupt a recording briefly. The recorder will continue to record when the pause button is released.

To Edit and Splice Tape

Since one track cannot be spliced without affecting the other, recordings to be edited should be limited to one-track tapes. Unwanted portions can be cut out and the desired selections joined together. Tape should be cut at a slight diagonal and the ends joined together with splicing tape on the glossy side. Excess splicing tape should be trimmed from the sides of the tape.

NOTE: Use splicing tape only. Do not use regular cellophane tape.

To Use as a Public Address System

Plug the microphone into Stereo Phono 1 jack. The internal speaker of the recorder can be used or an external system can be plugged into External speaker 1 jack. Do not point the speaker toward the microphone, because this will cause feedback which will produce howl.

Head Lifter

Push left lever of head lifter down for four-track recordings, and right lever down for two-track recordings.

DISASSEMBLY

To Remove Recorder From Case

1. Remove escutcheon from input and output jacks.
2. Remove four screws from bottom of case and four bolts from side.

3. Set case on side with speaker down and slide mechanism forward.
4. Unsolder speaker leads.
5. Reverse foregoing procedure to reassemble.

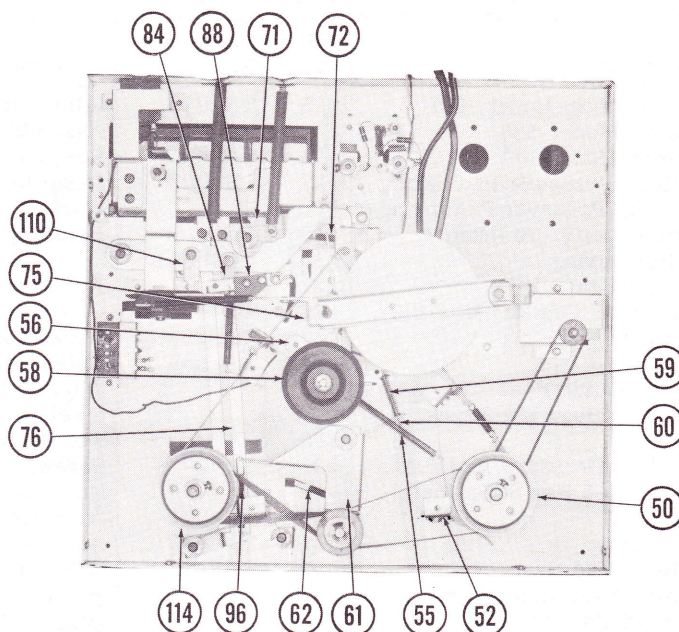


FIG.3 BOTTOM VIEW OF MECHANISM WITH MOTOR ASSEMBLY REMOVED

ADJUSTMENTS

To Align Erase Head

Loosen mounting nuts and set erase head so that top of head gap is even with top of tape. Tighten mounting nuts.

To Align Record-Playback Head

1. Put head in up position by pushing down on left tab of head mounting bracket assembly (42).

2. Loosen mounting nuts at side of head mounting bracket assembly (42). Set top of upper gap evenly with top of tape. Tighten mounting nuts.
3. Adjust for maximum output by turning alignment screw, on right side of mounting bracket, while playing a prerecorded alignment tape.

4. Repeat steps 2 and 3.

CLEANING

Pressure roller (22), capstan, and recording head (25) should be cleaned occasionally of dirt and foreign matter with a soft cloth moistened with alcohol.

LUBRICATION

These recorders do not require lubrication under normal use. When disassembled for repair, wipe all bearings and sliding levers with a clean soft cloth and apply a thin coat of oil to their surfaces.

MECHANICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TA-1255	Volume Control Knob - Model 333	6		Escutcheon Screw, 6-32 x 7/8 Ph. Hd.
	TA-1255	Volume Control Knob - Model 400	7	TS-2152	Spindle
2	TK-246	Tone Control Knob - Model 333	8		Washers
	TK-246	Tone Control Knob - Model 400	9		Ball Race
3		Screw, 6-32 x 1/4 Phil. Truss. Hd.	10	5133-25	Retaining Ring
4	TP-1249	Dress Plate - Model 333	11		Washer .255 I.D. x 1/2 O.D. x .010 Thick Steel
	TP-1249	Dress Plate - Model 400	12	TA-1488	Pressure Roller Plate Ass'y.
5	TA-1480	Escutcheon - Model 333	13	TB-2151	Motor Board
	TA-1483	Escutcheon - Model 400	14	TE-276-3	Rear Escutcheon- Model 333

MECHANICAL PARTS LIST (CON'T.)

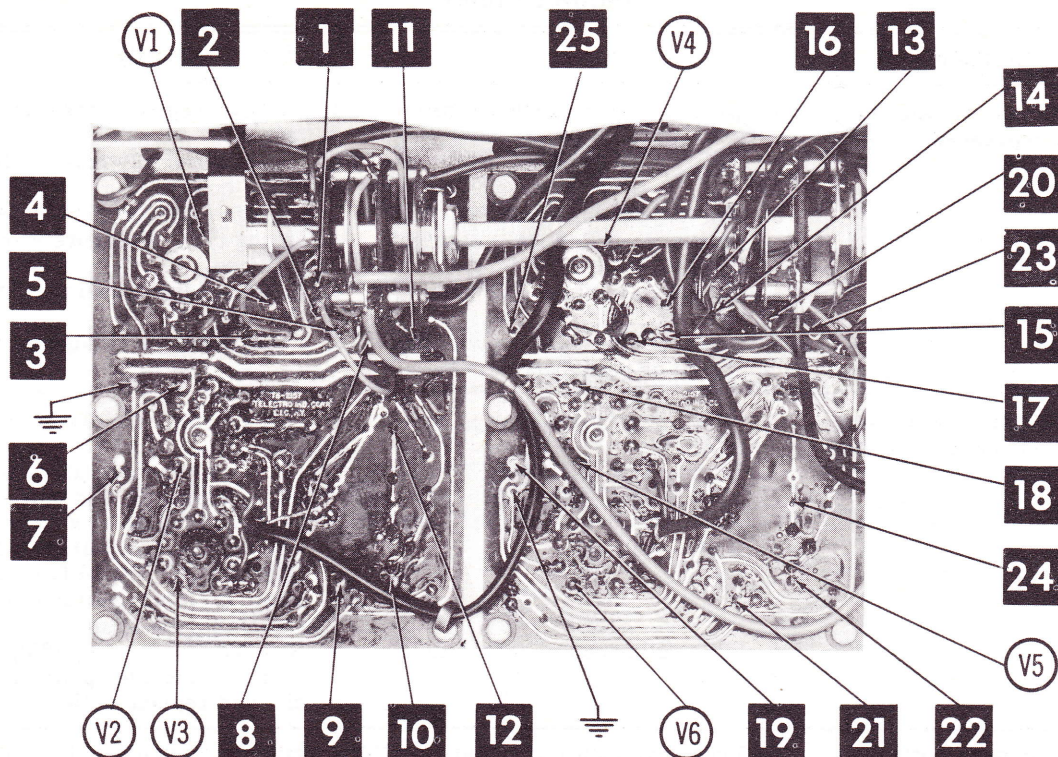
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
14	TE-276-3	Rear Escutcheon-Model 400	75	TA-1172	Idler Arm Support Speed Change Assembly
15	TB-1010	Pushbutton-Model 333	76	TR-1615	Push Rod
	TB-1010	Pushbutton-Model 400	77	TR-1615	Push Rod
16	TS-1993	Erase Head Pressure Pad Spring	78		Washer
17	TS-1902	Record Head Pressure Pad Spring	79	5133-25	Retaining Ring
18	TA-1349	Pushbutton Ass'y. Bracket	80	TR-1416	Switch Cam Roller
19	TS-1985	Pushbutton Spring	81	5133-12	Retaining Ring
20	5133-25	Retaining Ring	82	TS-2245	Cam Lever Spring
21		Washer, .255 I.D. x $\frac{1}{2}$ O.D. x .010	83	TS-1990	Brake Spring
22	TR-1846	Pressure Roller	84	TA-1169	Automatic Stop Actuator
23		Washer	85		Washer, 6 x 3/8 x 1/32 Fl. Steel
24	TG-476	Right Tape Guide Post	86		No. 6 Lockwasher
25	TH-584	Record-Play Head 1/4 Track Stereo	87		Screw, 6-32 x 3/8 Phil. Bdg. Hd. Mach.
26	TB-2130	Record Head Pressure Pad Brkt.	88	TA-1170-1	Automatic Shutoff Bracket Ass'y.
27		Screw, 6 x 3/8 Hex Sheet Metal Type Z	89	TS-1993	Automatic Stop Spring
28	5133-12	Retaining Ring	90	5133-12	Retaining Ring
29	TB-2137	Erase Head Pad Bracket	91		Speed Selector Lift Lever (Part of Item 111)
30	TB-1067	Pressure Roller Stop Plate Brkt.	92	TS-1980	Speed Selector Spring
31		Erase Head-Half Track - Model 333	93	5133-18	Retaining Ring
		Erase Head - 1/4 Track - Model 400	94		Washer, .192 I.D. x 3/8 O.D. x .010 Thick
32	TG-461	Left Tape Guide Post	95		Fiber Washer
33	TL-354-1	Stop Pushbutton Lever	96	TS-1981	Rewind Spring
34	TA-1560	Record Switch Lever	97		Washer, No. 6 I.D. x 7/16
35	TL-354	Pushbutton Lever	98		Screw, 6 x 3/8 Hex. Sheet Metal Type Z
36		Washer .203 I.D. x 3/8 O.D. x 1/32	99		Washer, .225 I.D. x $\frac{1}{2}$ O.D. x .010 Thick
37	TS-1986	Record Switch Spring	100	TL-346	Wind Spring Link
38	5133-18	Retaining Ring	101		Fiber Washer
39	TB-2152	Erase Head Bracket	102		Washer, .225 I.D. x $\frac{1}{2}$ O.D. x .010 Thick
40		Tape Guide Wire	103	5133-25	Retaining Ring
41	TS-1984	Pushbutton Latch Spring	104	TL-361	Solenoid Arm Lever
42	TB-2028	Record-Play Head Mtg. Brkt.	105		Lockwasher
43	TC-1747	Counter Ass'y.	106		Screw
44	TR-1614	Counter Drive Belt	107		Steel Washer
45	TA-1252	Flywheel Thrust Plate Ass'y.	108	5133-25	Retaining Ring
46		No. 6 Lockwasher	109	TS-2170	Speed Selector Locking Plate
47		Screw, 6-32 x $\frac{1}{2}$ Phil. Bdg.	110	TP-1008	Speed Selector Locking Plate
48	TS-2085	Brake Cord Spring	111	TA-1251	Speed Selector Bracket Ass'y.
49	TA-1183	Counter and Brake Pulley Ass'y.	112	TC-1741	Speed Selector Wheel
50	265	Spindle Pulley for Drive Belt	113	TA-1164	Brake Pulley
51		Set Screw	114	265	Spindle Pulley for Drive Belt
52	TB-2180	Motor Mounting Bracket	115	TL-367	Rewind Spring Link
53		Washer	116		Hex Nut
54	TF-324	Flywheel	117		No. 6 Lockwasher
55	TS-1993-1	Idler Wheel Spring	118		Washer, 6 x 7/16 O.D. x 1/32 Thk.
56	TA-1174	Idler Arm Pivot Ass'y.	119		Washer
57		Fiber Washer	120	TP-1003-1	Motor Mounting Plate
58	TW-424	Idler Wheel	121	TG-475	Grommet
59	TS-2041	Takeup Compression Spring	122	TS-1942	Motor Mounting Spacer
60	TA-1225	Idler Release Rod Assembly	123		Washer, 6 x 7/16 O.D. x 1/32 Thick
61	TA-1163	Idler Pulley Arm Assembly	124	TA-1462	Motor and Pulley Ass'y.
62	TS-1981	Wind Spring	125		Motor Pulley (Part of Item 124)
63	TR-1548	Idler Drive Belt	126	5133-18	Retaining Ring
64	TB-1018	Wind or Rewind Belt	127		Washer
65	TA-1489	Idler Pulley Assembly	128		Spring Washer
66	TW-454	Fiber Thrust Washer	129		Fiber Washer
67	5133-25	Retaining Ring	130		Felt Washer, 3/16 I.D. x 11/16 O.D. x 1/16 Thick
68	TS-1988	Pause Linkage Spring	131	TF-339	Fan
69	TS-2086	Swivel Head Lifter Shaft	132	TB-1093	Brake Cord, Dacron 24" Long
70	TS-1911	Idler Elevation Shaft			
71	TA-1176-1	Play Lever and Cam Ass'y.			
72	TS-2244	Pressure Roller and Back Tension Spring			
73	TA-1173-1	Brake Arm Assembly			
74	TB-1050	Brake Cord Retainer Bracket			

TROUBLE CHART

Symptom	Cause	Remedy
Tape fails to move when Play button is depressed.	<ol style="list-style-type: none"> 1. Worn or dirty pressure roller (22). 2. Supply spindle binds. 3. Not enough pressure to hold pressure roller (22) against flywheel (54). 4. Idler wheel spring (55) weak or missing. 5. Posts of idler arm pivot (56) rusted or plate bent. 	<ol style="list-style-type: none"> 1. Clean or replace pressure roller (22). 2. Clean supply spindle or loosen brake cord. 3. Increase tension of back tension spring (72). Pressure should be 16-24 oz. 4. Replace idler wheel spring (55). 5. Clean posts or straighten plate.
Tape fails to move when Wind or Rewind button is depressed.	<ol style="list-style-type: none"> 1. Idler drive belt (63) slipping or missing. 2. Brakes (132) too tight. 3. Wind or rewind belts (64) broken or too tight. 4. Idler pulley ass'y. (65) binding. 	<ol style="list-style-type: none"> 1. Clean or replace idler drive belt (63). 2. Loosen brake cord (132) from the motor mounting stud side. 3. Replace wind or rewind belt (64). Idler pulley arm (61) should have $1/16'' + 1/32''$ travel from left to right in idle position without stretching the belts. 4. Remove idler pulley (65), clean shaft on arm idler pulley ass'y., oil, and replace pulley.
Variation in speed after re-recorder has been in operation.	<ol style="list-style-type: none"> 1. Pressure roller (22) too tight against flywheel (54). 2. Oil or dirt on flywheel (54), idler wheel (58), idler pulley (65), or motor pulley (125). 3. Wind-Rewind belts (64) too short. 4. Pressure pad springs (16) and (17) too tight. 	<ol style="list-style-type: none"> 1. Adjust as mentioned in remedy 3 of first symptom. 2. Clean surfaces of these parts with an industrial cleaner. 3. Adjust idler pulley arm (61) as mentioned in remedy 3 of preceding symptom. 4. Loosen springs by bending anchor back.
No speed change.	<ol style="list-style-type: none"> 1. Speed change bracket (111) arm has jumped out of groove of idler arm (75). 2. Speed sliding post gummed up or corroded. 3. Support bracket of idler arm (75) jumped to left of play lever and cam bracket (71). 	<ol style="list-style-type: none"> 1. Reposition speed change bracket (111) arm in groove. Tighten lever retainer spring (92). Straighten speed change bracket (111). 2. Clean or replace sliding post and apply a thin film of oil. 3. Bend support bracket (75) down so it will clear top of play lever and cam bracket (71).
Automatic stop does not function.	<ol style="list-style-type: none"> 1. Automatic stop switch out of position. 	<ol style="list-style-type: none"> 1. Adjust automatic stop switch so it trips when arm passes line of travel.
Automatic stop does not function.	<ol style="list-style-type: none"> 1. Solenoid arm (104) too far from solenoid. 	<ol style="list-style-type: none"> 1. Bend solenoid arm (104) so that there is no more than $1/8''$ clearance between solenoid arm (104) and solenoid.
Incomplete Erase	<ol style="list-style-type: none"> 1. Dirty erase head (31). 2. Defective electrical components. 	<ol style="list-style-type: none"> 1. Clean erase head (31) with soft cloth and alcohol. 2. Check voltages and resistances. Replace defective part.
Recording weak or distorted.	<ol style="list-style-type: none"> 1. Dirty record-playback head (25). 2. Defective electrical components. 	<ol style="list-style-type: none"> 1. Clean record-playback head (25) with a soft cloth and alcohol. 2. Check voltages and resistances. Replace defective part.

TELECTRO MODELS
333, 400

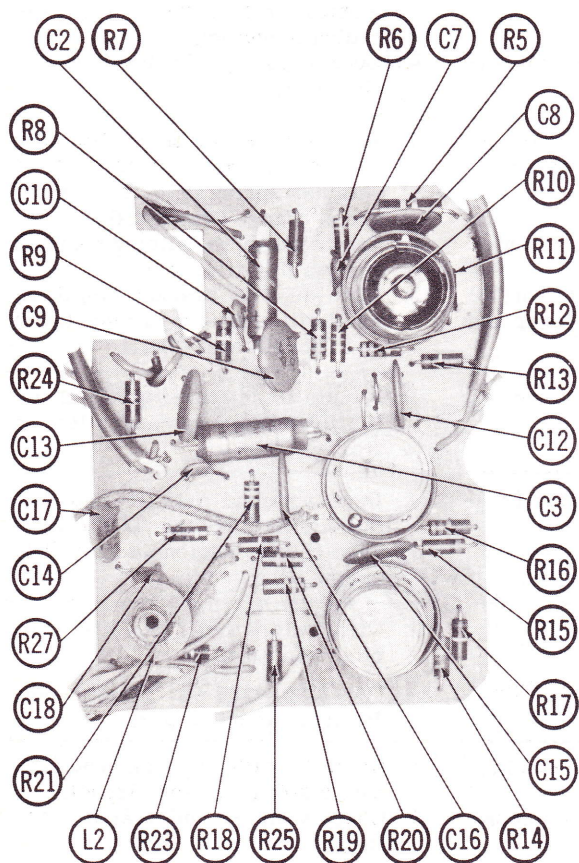
FOLDER 11



A Howard W. Sams CIRCUITRACE® Photo

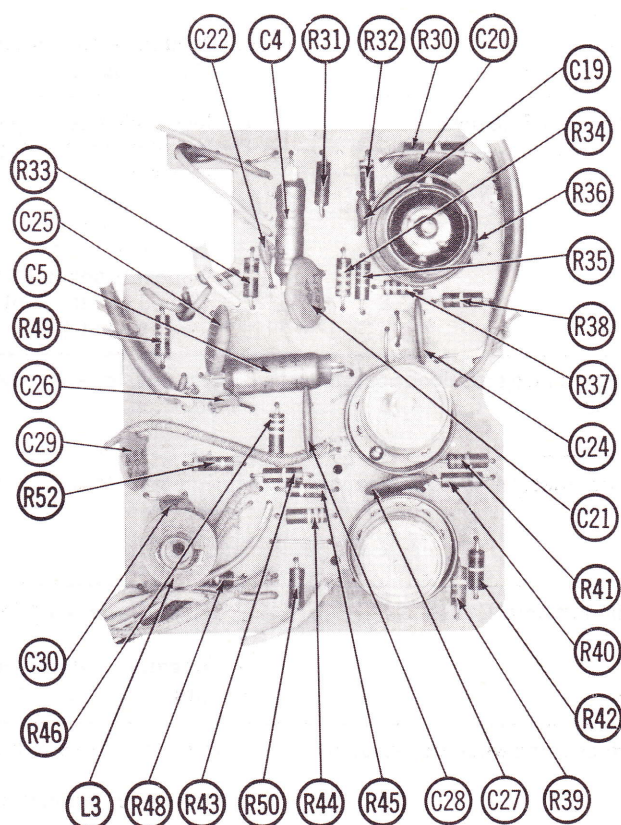
PRINTED BOARD—MODEL 400

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

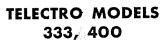


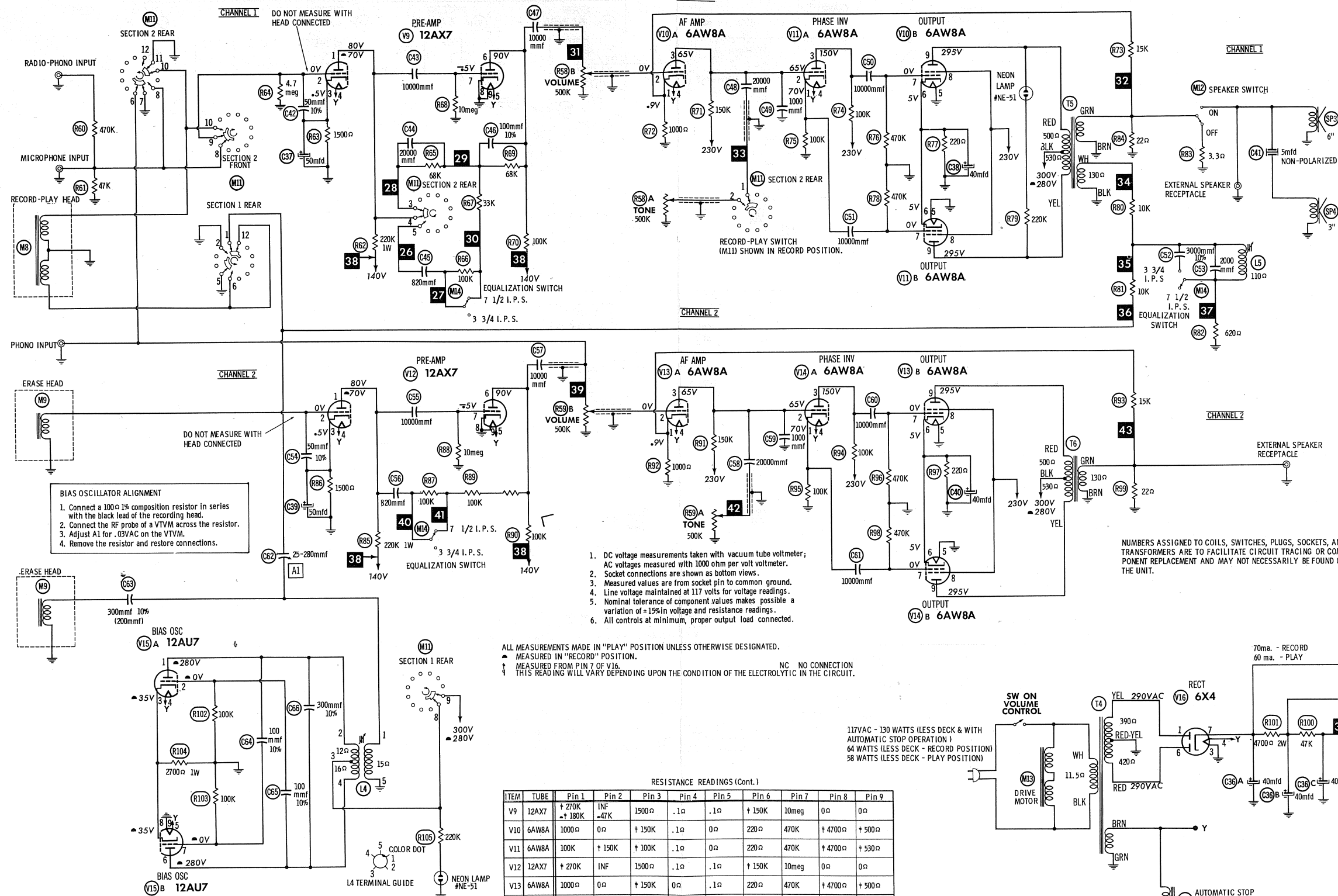
CHANNEL 1

PRINTED BOARDS—MODEL 400



CHANNEL 2

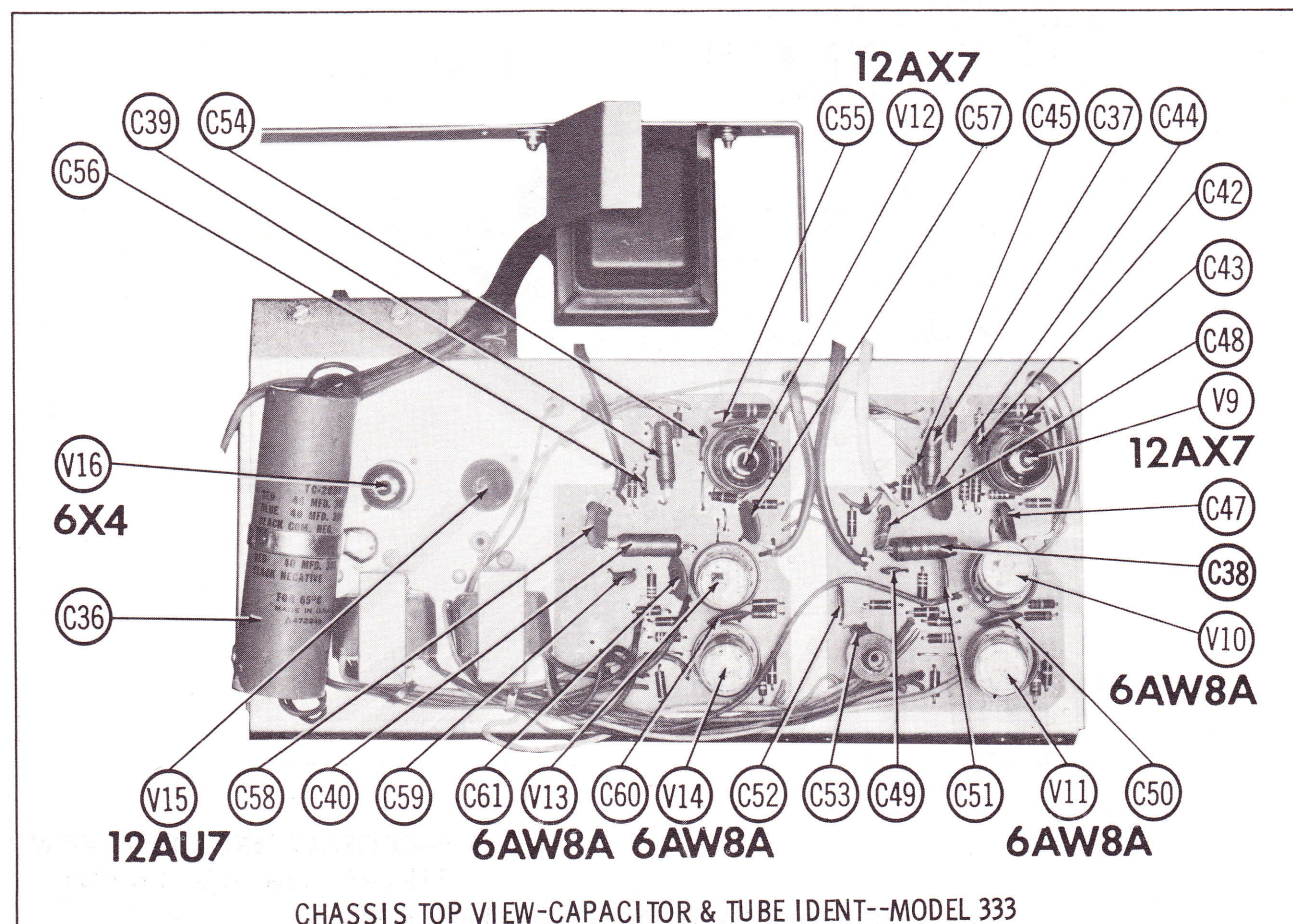
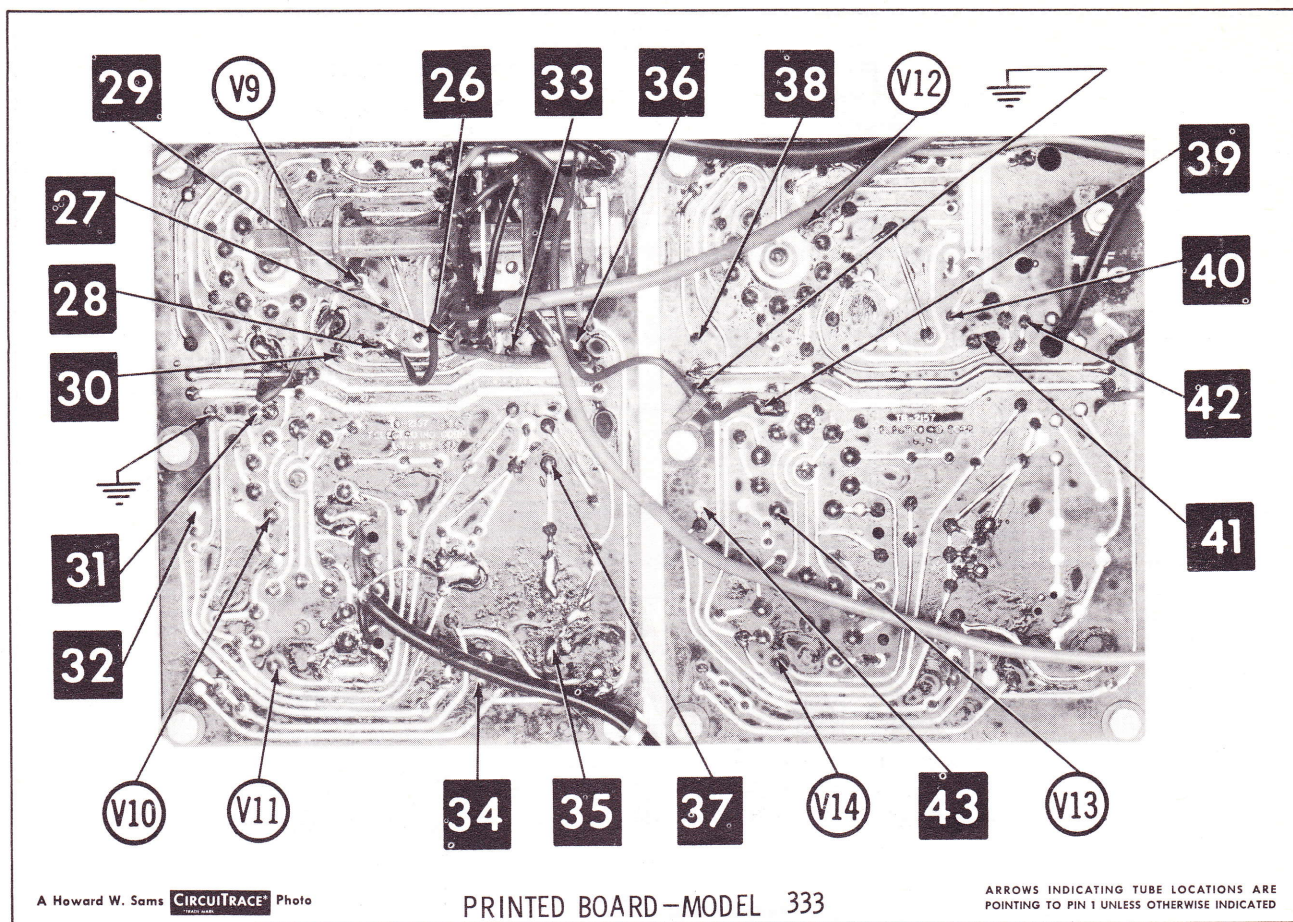


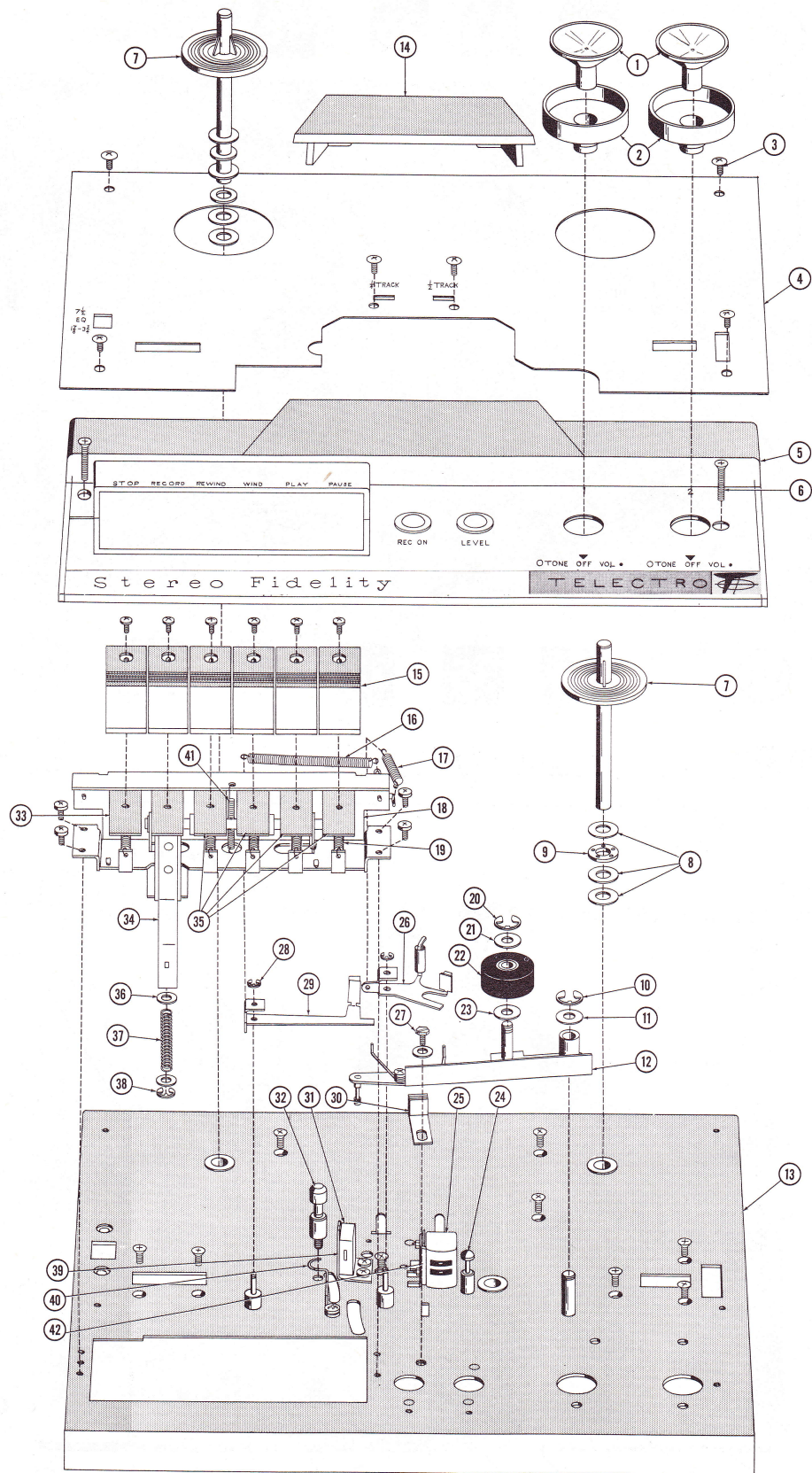


A PHOTOFACT STANDARD NOTATION SCHEMATIC
with CIRCUITRACE
© Howard W. Sams & Co., Inc. 1961

MODEL 333

ELECTRO MODELS
333, 400



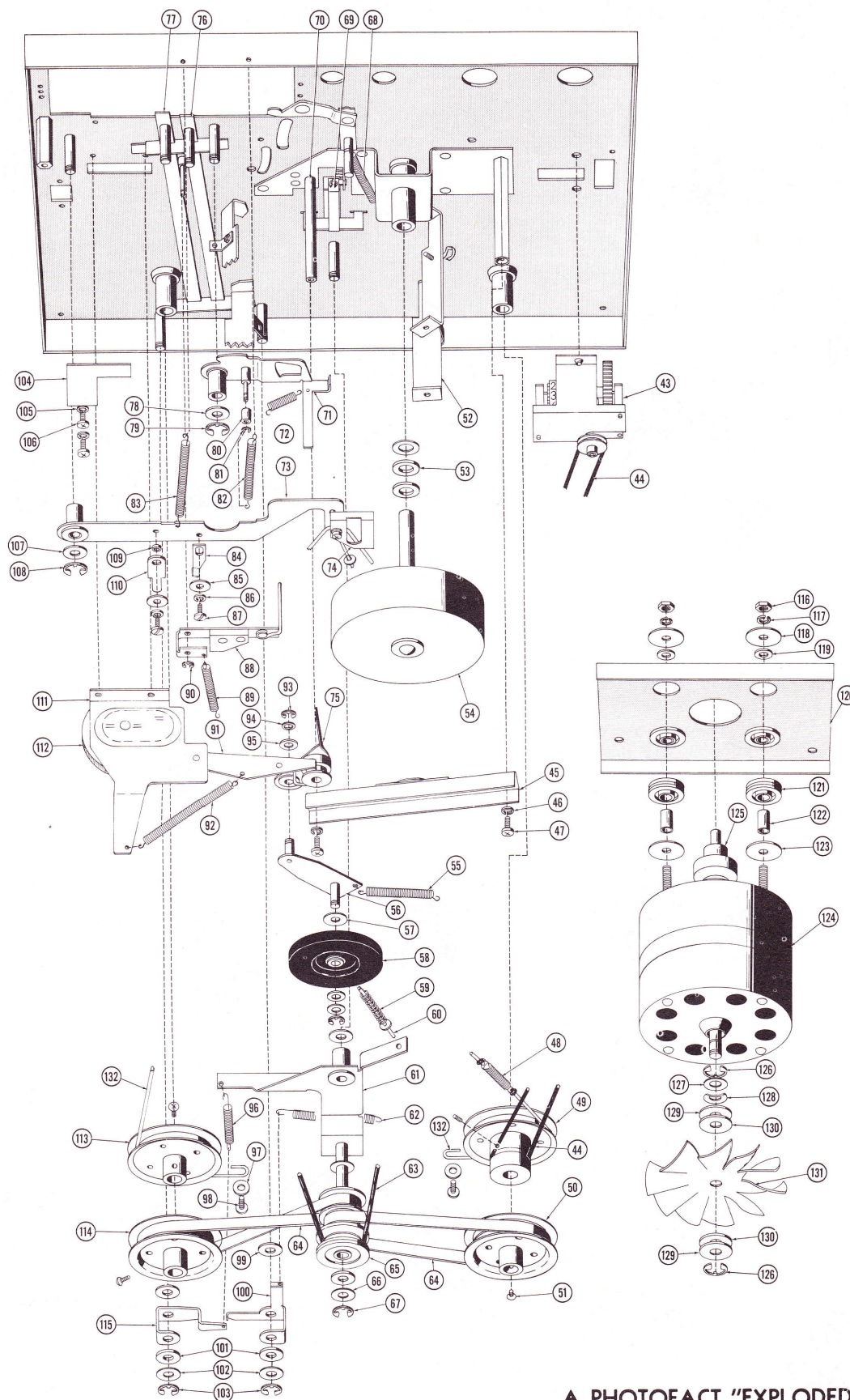


A PHOTOFACT "EXPLODED" VIEW

© Howard W. Sams & Co., Inc. 1961

EXPLODED VIEW OF PARTS ABOVE BASE PLATE

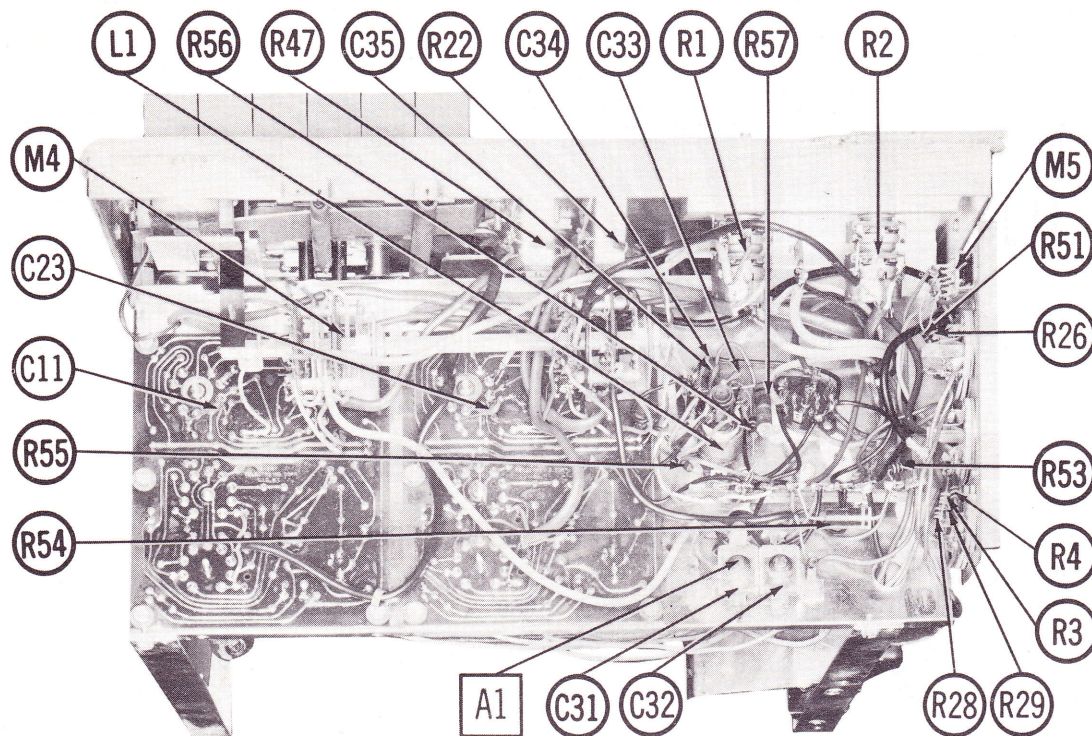
**TELECTRO MODELS
333, 400**



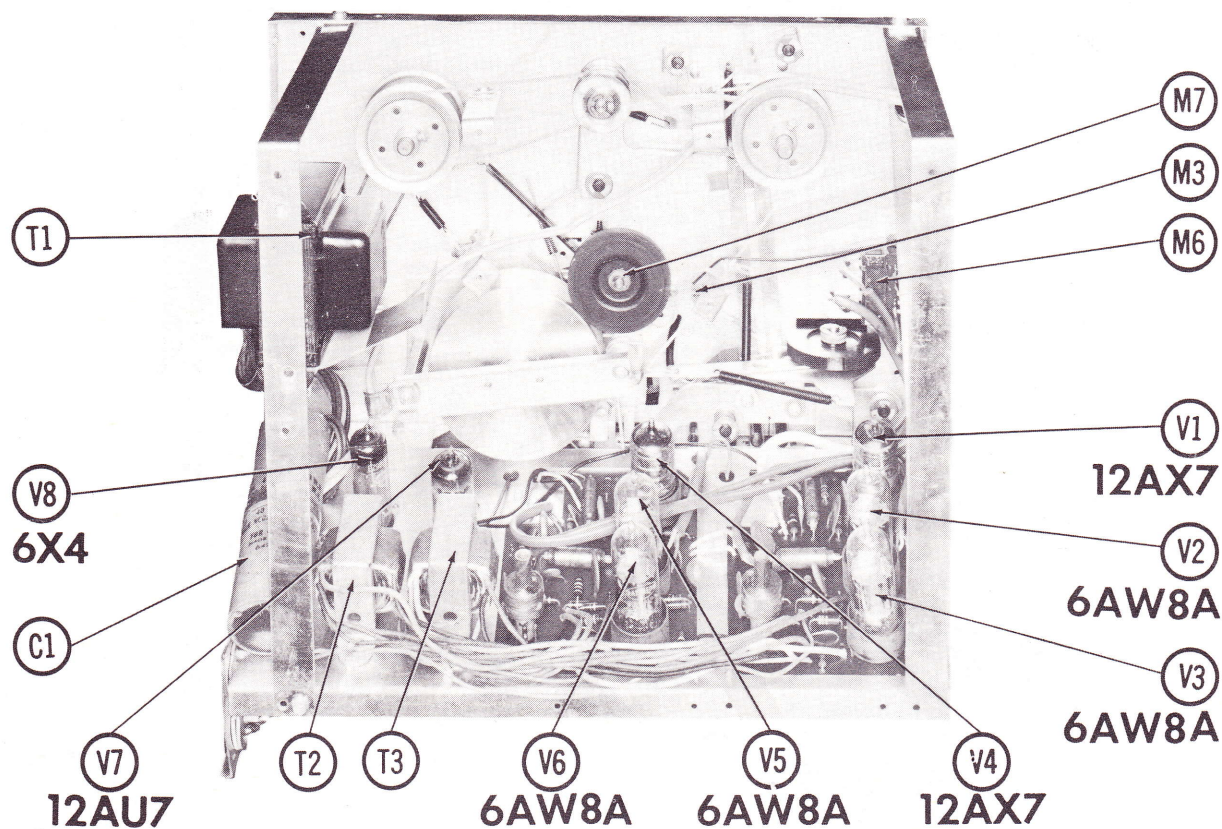
A PHOTOFAC "EXPLODED" VIEW
©Howard W. Sams & Co., Inc. 1961

EXPLODED VIEW OF PARTS BELOW BASE PLATE

FOLDER 11



CHASSIS BOTTOM VIEW—MODEL 400



CHASSIS TOP VIEW—MODEL 400

MODEL 400 PARTS LIST AND DESCRIPTIONS

TUBES

GENERAL ELECTRIC			RAYTHEON			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	Preamplifier	12AX7	V5	AF Amp. -Output	6AW8A			
V2	AF Amp. -Output	6AW8A	V6	Phase Inv. - Output	6AW8A			
V3	Phase Inv. - Output	6AW8A	V7	Bias Oscillator	12AU7			
V4	Preamplifier	12AX7	V8	Rectifier	6X4			

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	TELECTRO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	500K	1/2	TC-1721	F1-41		† QJ-1510R	■UE4182-S	Tone, Channel 1 Volume, Channel 1 Power Off-On
B	500K	1/2		R2-41				
C	Switch			KR-1				Tone, Channel 2 Volume, Channel 2 (Not Used)
R2A	500K	1/2	TC-1721	F1-41		† QJ-1510R	■UE4182-S	
B	500K			R2-41				
C	Switch			KR-1				

† "CONCENTRIKIT" equivalent: K-15 Kit with base elements & shafts: B13-133, P17-024, (Panel)
(Not available as a factory assembled unit.)
B13-133, R1-103, (Rear)
76-1 (Switch)

■ "STA-LOC" equivalent: FB55A, RU55A, OS750A, IS 1187, US41.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	TELECTRO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1A	40	300	TC-2001	PR3-020	BBRT0185	WQ795		TVAS-3745 *	
B	40	300							
C	40	300							
C2	50	3	TC-1550	XPP-3050	NLW50-3	TT6X50	ML50-3	TE-1058	
C3	40	10	TC-1996	XPP-10040	NLW40-10	TT15X40	ML40-12	TE-1119	
C4	50	3	TC-1550	XPP-3050	NLW50-3	TT6X50	ML50-3	TE-1058	
C5	40	10	TC-1996	XPP-10040	NLW40-10	TT15X40	ML40-12	TE-1119	
C6	5	10NP	TC-2000	PRS-7405	BBR4-150	TCN105		TVANS-1110 *	

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C7	50 10%		D1-50	DD-500	L10Q50	CCD-500	GP450	10TS-Q50
C8	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C9	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C10	820		D1-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C11	100 10%		D1-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C12	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C13	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C14	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C15	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C16	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C17	3000 10%		D1-3000		PM6D3	CCD-302	JL-233	10TS-D30
C18	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C19	50 10%		D1-50	DD-500	L10Q50	CCD-500	GP450	10TS-Q50
C20	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C21	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C22	820		D1-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C23	100 10%		D1-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C24	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C25	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C26	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C27	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C28	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C29	3000 10%		D1-3000		PM6D3	CCD-302	JL233	10TS-D30
C30	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C31	25-280	#TC-2007				464		
C32	25-280	#TC-2007				464		
C33	100 10%		D1-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C34	100 10%		D1-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C35	600			DD-601	L10T3	CCS-621	GP360	10TS-T60

Telectro Part Number.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R3	470K		R22	220K		R41	15K	
R4	47K		R23	10K		R42	100K	
R5	220K 1W		R24	10K		R43	100K	
R6	4.7meg		R25	22Ω		R44	470K	
R7	1500Ω		R26	3.3Ω		R45	220Ω	
R8	68K		R27	620Ω		R46	470K	
R9	100K		R28	470K		R47	220K	
R10	33K		R29	47K		R48	10K	
R11	10meg		R30	220K 1W		R49	10K	
R12	68K		R31	1500Ω		R50	22Ω	
R13	100K		R32	4.7meg		R51	3.3Ω	
R14	150K		R33	100K		R52	620Ω	
R15	1000Ω		R34	68K		R53	47K	
R16	15K		R35	33K		R54	4700Ω 2W	
R17	100K		R36	10meg		R55	100K	
R18	100K		R37	68K		R56	100K	
R19	470K		R38	100K		R57	1500Ω 1W	
R20	220Ω		R39	150K				
R21	470K		R40	1000Ω				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		TELECTRO PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L1	Osc. Coil	TC-1937				
L2	Equalization Coil	TC-1947				
L3	Equalization Coil	TC-1947				

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	TELECTRO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V @ 1.1A	580VCT @ .070A DC	6.3V @ 4.8A	TT-770					

MODEL 400 PARTS LIST (Continued)

PAGE 18

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC. 1	TELECTRO PART No.	Merit PART No.	Stancor PART No.	Triad PART No.	
T2	9600Ω CT	3-4Ω	TT-774-1				
		SEC. 2					
		64Ω					
T3	9600Ω CT	SEC. 1	TT-774				
		3-4Ω					
		SEC. 2					
		64Ω					

SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
	SIZE	FIELD	TELECTRO PART No.	QUAM PART No.	
SP1	6"	PM	TS-2293	6A21	
SP2	3"	PM	TS-2292	3A15T23.1	

MISCELLANEOUS

ITEM No.	PART NAME	TELECTRO PART No.	NOTES
M1	Head	TH-584	1/4 Track Stereo, Record-Playback
M2	Head	TH-590	1/4 Track Stereo, Erase
M3	Solenoid	TC-1783-1	
M4A	Switch		Record-Playback, Channel 1 (Rotary Wafer Type)
M4B	Switch		Record-Playback, Channel 2 (Rotary Wafer Type)
M5	Switch		Speaker (DPDT Slide Type)
M6	Switch		Power-Off-On (Slide Type)
M7	Motor Assembly	TA-1462	Includes Pulley
	Microphone	TM-410	Includes Cord and Plug

CABINETS & CABINET PARTS

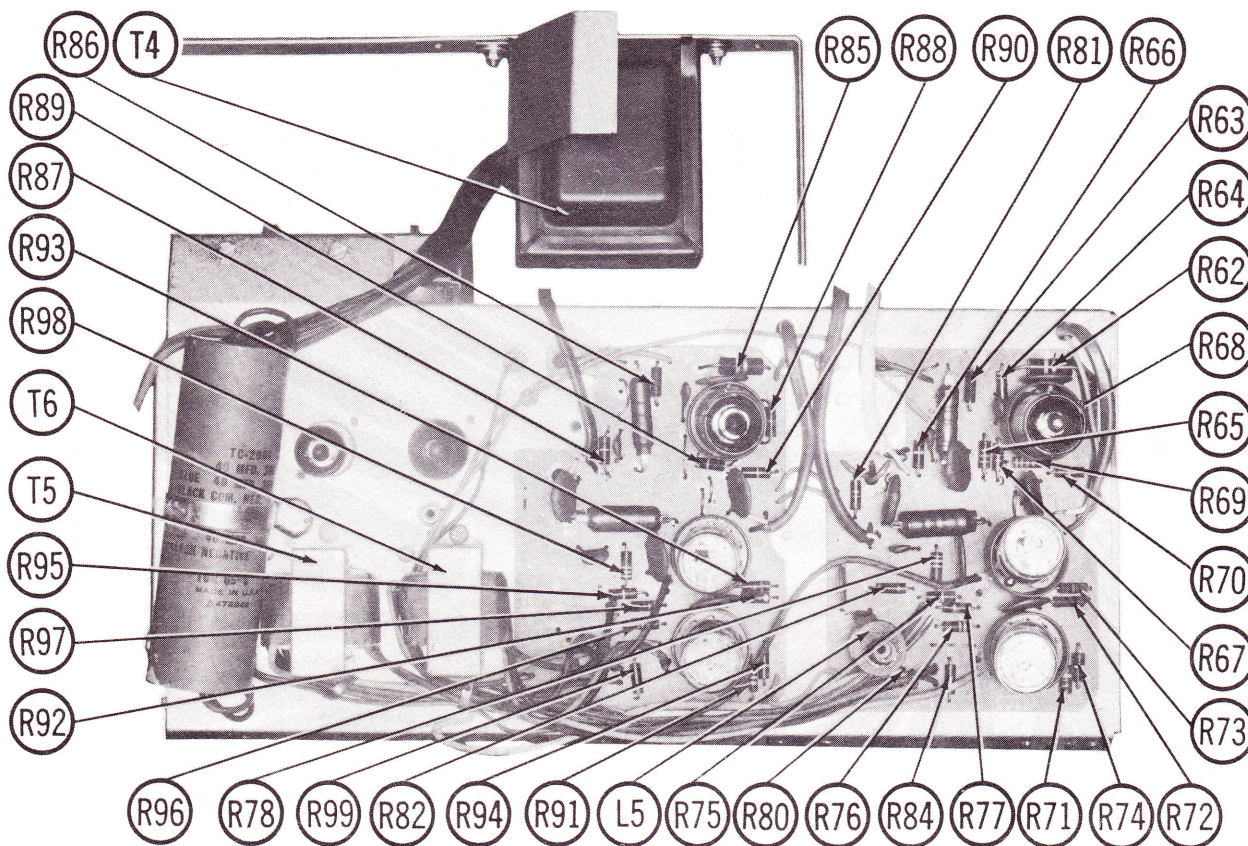
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	TA-1955	Volume, Model 333
Knob	TA-1955	Volume, Model 400
Knob	TK-246	Tone, Model 333
Knob	TK-246	Tone, Model 400
Button-Push	TB-1000	6 Used, Model 333
Button-Push	TB-1010	6 Used, Model 400

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
 Power Cord Use BELDEN No. 8524 (Stranded) Available in Ten Colors
 Low-Loss Shielded Lead (Interconnecting) Use BELDEN No. 1725-K (7½ Ft. Length)
 Photo Pick-up Arm Cable Use BELDEN No. 8401
 Use BELDEN No. 8430 (Two Conductor - Twisted)

CHASSIS—TOP VIEW MODEL 333



PARTS LIST—MODEL 333

CHASSIS—BOTTOM VIEW MODEL 333

TUBES

GENERAL ELECTRIC				RAYTHEON				SYLVANIA			
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V9	Preamplifier	12AX7	V13	AF Amp. -Output	6AW8A	V10	AF Amp. -Output	6AW8A	V14	Phase Inv. - Output	6AW8A
V11	Phase Inv. - Output	6AW8A	V15	Bias Oscillator	12AU7	V12	Preamplifier	12AX7	V16	Rectifier	6X4

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		TELECTRO PART No.	REPLACEMENT DATA			NOTES
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	PYRAMID PART No.	
C36A	40	300	TC-2001	PR3-020	BBRT0185	WQ795	TVAS-3745 *
B	40	300					
C	40	300					
C37	50	3	TC-1550	XPP-3050	NLW50-3	TT6X50	TE-1058
C38	40	10	TC-1986	XPP-10040	NLW40-10	TT15X40	TE-1119
C39	50	3	TC-1550	XPP-3050	NLW50-3	TT6X50	TE-1058
C40	40	10	TC-1986	XPP-10040	NLW40-10	TT15X40	TE-1119
C41	5	10XP	TC-2000	PFS-7405	BBR4-150	TCN105	TVANS-1110 *

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

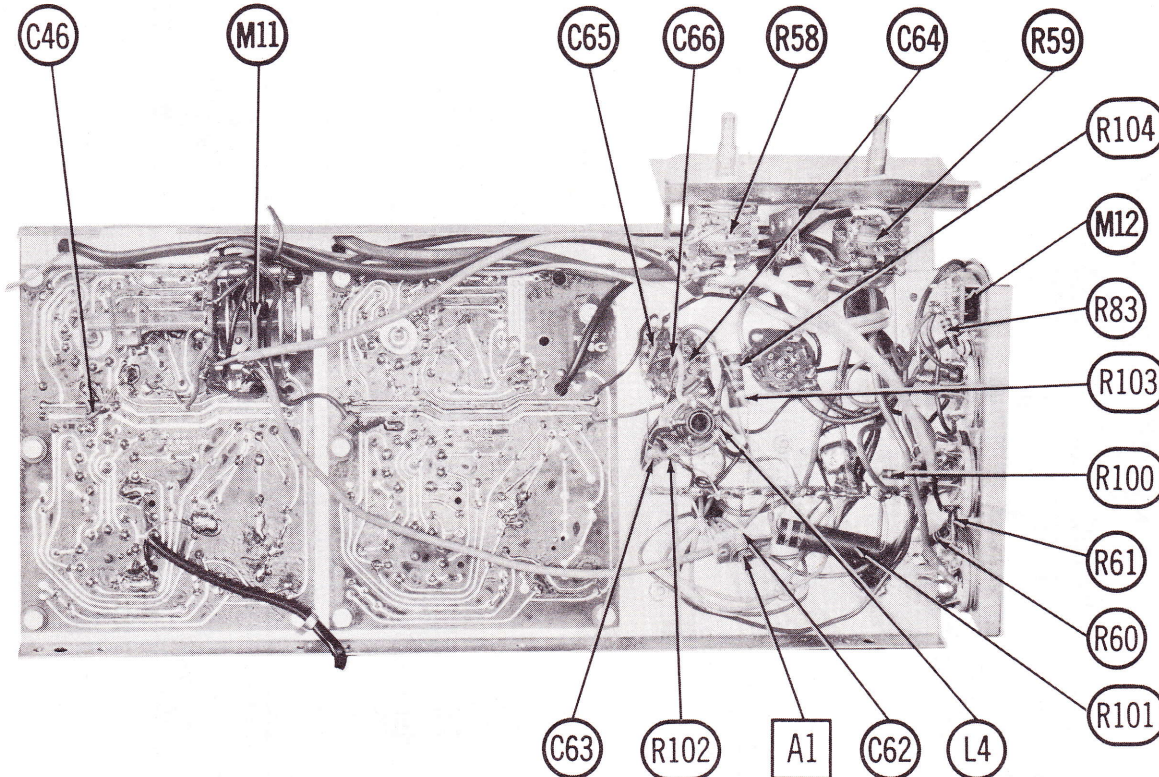
Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						SPRAGUE PART No.
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL- DUBILIER PART No.	ELMENDO PART No.	MALLOY PART No.		
C42	50 10%		DI-50	DD-500	LI0450	CCD-500	GP450	10TS-Q50	
C43	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C44	20000		BPD-02	DD-203	BYB652	CCD-203	B-120	5HK-S20	
C45	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82	
C46	100 10%		DI-100	DD-101	LI0T1	CCD-101	GP310	10TS-T10	
C47	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C48	20000		BPD-02	DD-203	BYB652	CCD-203	B-120	5HK-S20	
C49	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10	
C50	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C51	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C52	3000 10%		DI-3000	DD-3002	PM6D3	CCD-302	JL233	10TS-D30	
C53	2000		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20	
C54	50 10%		DI-50	DD-500	LI0450	CCD-500	GP450	10TS-Q50	
C55	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C56	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82	
C57	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C58	20000		BPD-02	DD-203	BYA10D2	CCD-203	B-120	5HK-S20	
C59	1000		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10	
C60	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C61	10000		BPD-01	DD-103	BYA081	CCD-103	B-110	5HK-S10	
C62	25-280	#TC-2007 (200) †				464			
C63	300 10%		DI-300	DD-301	LI0T3	CCD-301	GP330	10TS-T30	
C64	100 10%		DI-100	DD-101	LI0T1	CCD-101	GP310	10TS-T10	
C65	100 10%		DI-100	DD-101	LI0T1	CCD-101	GP310	10TS-T10	
C66	300 10%		DI-300	DD-301	LI0T3	CCD-301	GP330	10TS-T30	

Telectro Part Number.
† Alternate Value.

TELECTRO MODELS
333, 400

FOLDER 11



PARTS LIST MODEL 333 (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	TELECTRO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R58A	500K	1/2	TC-1721	F1-41		†QJ-1510R	■UE4182S	Tone, Channel 3 Volume, Channel 3 Power Off-On Tone, Channel 4 Volume, Channel 4 (Not Used)
B	500K			R2-41				
C	Switch	1/2		KR-1				
R59A	500K		TC-1721	F1-41		†QJ-1510R	■UE4182S	
B	500K			R2-41				
C	Switch			KR-1				

† "CONCENTRIKIT" equivalent: K-15 Kit with base elements & shafts: B13-133, P17-024, (Panel)
(Not available as a factory assembled unit.) B13-133, R1-103, (Rear)
76-1 (Switch)

■ "STA-LOC" equivalent: FB55A, RU55A, OS750A, IS1187, US41.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R60	470K		R76	470K		R92	1000Ω	
R61	47K		R77	220Ω		R93	15K	
R62	220K 1W		R78	470K		R94	100K	
R63	1500Ω		R79	220K		R95	100K	
R64	4.7meg		R80	10K		R96	470K	
R65	68K		R81	10K		R97	220Ω	
R66	100K		R82	620Ω		R98	470K	
R67	33K		R83	3.3Ω		R99	22Ω	
R68	10meg		R84	22Ω		R100	47K	
R69	68K		R85	220K 1W		R101	4700Ω 2W	
R70	100K		R86	1500Ω		R102	100K	
R71	150K		R87	100K		R103	100K	
R72	1000Ω		R88	10meg		R104	2700Ω 1W	
R73	15K		R89	100K		R105	220K	
R74	100K		R90	100K				
R75	100K		R91	150K				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		TELECTRO PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L4	Osc. Coil	TC-1937				
L5	Equalization Coil	TC-1947				

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	TELECTRO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T4	117V @ 1.1A	580 VCT @ .070A DC	6.3V @ 4.8A	TT-770					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	TELECTRO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T5	9600Ω CT	3-4Ω	TT-774					
		SEC. 2						
		64Ω						
	PRI.	SEC. 1						
T6	9600Ω CT	3-4Ω	TT-774-2	A-2938	A-3856	22S86	S-51X	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TELECTRO PART No.	QUAM PART No.	
SP3	6"	PM	3-4Ω	TS-2293	6A21	
SP4	3"	PM	3-4Ω	TS-2292	3A15TZ3.1	

MISCELLANEOUS

ITEM No.	PART NAME	TELECTRO PART No.	NOTES
M8	Head	TH-584	1/4 Track Stereo, Record-Playback
M9	Head	TH-556	1/4 Track Stereo, Erase
M10	Solenoid	TC-1783-1	
M11	Switch		Record-Playback (Rotary Wafer Type)
M12	Switch		Speaker (DPDT Slide Type)
M13	Motor Ass'y. Microphone	TA-1462 TM-410	Includes Pulley Includes Cord & Plug

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Power Cord Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)
Low-Loss Shielded Lead (Interconnecting) Use BELDEN No. 8401
Phono Pick-up Arm Cable Use BELDEN No. 8430 (Two Conductor - Twisted)